

### ABSTRACT

A W3 Trust Model is described for evaluating trust and transitivity of trust of online services. By introducing a set of trust attributes for each web document, the W3 Trust Model combines a vertically trusted public key infrastructure with a horizontal referral web classification. It provides a mechanism to assess both the trust and the transitivity of trust of web contents in a heterogeneous environment. The trust attributes are categorized in three categories: a first category which relates to contents of the web document, a second category which relates to owner of the web document, and a third category which relates to relationships of the web document and certificate authorities. The method includes calculating a P value representing a standalone page trust assessment of the target web document based on trust attribute values in the first category, a Q value representing a standalone page trust assessment of the target web document based on trust attribute values in the second and third categories, and an S value representing a subordinate node assessment based on a total trust value and a relevance value R of each of a plurality of other web documents linked to the target web document. The P, Q and S values are then combined to calculate a total trust value of the target web document.